App. F. IX-4

PRESERVED

Previous References. 1941-42 (, R.T)

R.T File No. 75-41

Serial Nos. 1 to 15

References.

(86)

GENERAL AND REVENUE SECRETARIAT.

Serial Nos. Fifteen

Preserve

7/5/5

Part B for March '42

SUBJECT.

Rules applicable to gas producers installed in Motor Vehicles.

Issues of Rules ordered to be deferred.

"INDUSCOM."

DEPARTMENT OF INDUSTRIES AND COMMERCE. 1676

B.G.A. Mudaliar Esq.,
B.A.,B.Sc.,A.M.I.Mech.E.
Director.

OFFICE OF THE DIRECTOR,
Bangalore, Dated the 24th Septr.1941.

SECY. DEV. GOVT OF MYSORE 29 SEP 1941

OFFICE OF THE MINISTER FOR LAW
SEP 27 1941
No. 3064

D. O. No. A1/41-42.

Dear Mr. Vedavyasacharya,

I am sending herewith 4 copies of the proceedings of the "Producer Gas Equipment Committee" of the Traffic Board, Government of Madras, which held its meetings between the 15th and 18th instants, as desired by you.

I suggest that this matter may be taken up as early as possible by the Traffic Board and suitable additions and modifications made in the existing rules as is proposed to be done in Madras.

Yours sincerely,
BGAMudaliar

V.Vedavyasacharya Esq., B.A.,
Secretary to Government of Mysore,
Development Department,
Bangalore.

In favour of perusal. (Two copies are placed below)

Law 3) Endorsement copies with the file
Secy. Dev. Dept. 4) Spare
Law

C.21/41-42

Use of Producer Gas Plants for Motor Vehicles in the State

1676. 1207/T3

General and Revenue Secretariat. | File No. of 193 . | [App. F. III-2

Secretary

3) Please expedite further action & send to Law Dept for final issue of orders in the light of Madras action recently announced

Refer. 3064/41

WD 5/10/41

WD 5/10/41

6) The cutting from the Madras Mail dt 1-10-1941 relating to the Madras Govt Producer Gas plants is placed below for perusal

WD 9/10

5/10

7) In necessary action.

Sec'y Law 10/10

WD 10/10/41

8) Hm 2 10/10/41

9) Submitted a draft letter to Secy Madras Govt for as mentioned

SG 12/10.

10) Issued.
2 11/10/41

Issued letter No. T. 1683/41 dated 13-10- to the Secretary, Central Road Traffic Board Madras, for particulars.

SECRETARY'S 10 OCT. 1941 GOVT OF MYSORE

SECRETARY 1207 OCT 14 1941 MYSORE

Suo. 14/10

NOTE—Contn. Sheet.

Use of Producer gas plants on motor vehicles in the State. 1207 1338.

File No. of 193 . | General and Revenue Secretariat

Received letter No. L. Dis. 10624/41 dated 23-10-41 from the Secretary, Central Road Traffic Board, Madras, forwarding a copy of G.O. No. 1768/sevelapmt dated 27-9-41.

11) The G.O. of the Madras Govt., a copy of which is received with fr. n.d., is on the recommendation of the Committee which commenced its meetings on 15-9-41 (Copy of the proceedings in pp. 1 to 18 of the file)

12) It is also stated that the framing of Special rules is under consideration of the Government. Kind reference is invited to paras 2 & 3 of the notes supra. For orders whether the file may be sent at this stage for examination by the Director of Industrial Planning and the Industrial Engineer, or whether the issue of Special Rules by the Madras Govt. may be awaited.

Submitted for orders.

28/10.

28/10

13) 2 28/10/41.

(Law Dept)

15) 'A' may be done as ordered in para 4 supra.

Minister for Labour

Hm 2 31/10/41.

J.O. No. T. 12/41-42 dt 3rd Nov 1941.

16 Forwarded with compliments to the Director of Industrial Planning in Mysore, Bangalore, for favour of consideration and remarks.

/A (11

SECY. LAW DEPT. 23 OCT 1941 GOVT OF MYSORE

2/31/10

OFFICE OF THE COMMR OF LABOUR No. U.O.3 Date 4.11.41

His Lordship the Minister for Labour

Secretary, Mysore Traffic Board. 3-11-41.

1/11 1/11

Use of Producer Gas

M. T. B. F. 13]

Mysore Traffic Board

17) File No. of 194 .

Serial No.

Returned Cit Compliments.

Action may be taken on the lines of Orders passed by Madras Govt on the recommendations of the Committee (Vide G.O. No. Press 1768 Dt 27 Sept 1941), with suitable modifications as to dates & places etc.

18) We may await the special rules under the Motor Vehicles Act to be issued by that Govt before we formulate our own (Vide para 3 of Madras G.O.).

19) We may also await results of action taken by Madras Govt on the other recommendations of the Committee

13/11/41

Secretary Traffic Board

20) Submd. for orders with reference to para 3 supra.

SG. 17/11

21) The remarks of the Director of Industrial Planning are contained in paras 17 to 19 of the notes supra.

22) In their Government Order No. 1768 dated 27th September 1941, the Madras Government have prescribed only the general specifications in regard to construction of gas plants. Their Rules, stated to be under consideration of Government now, when issued are likely to give full details. It will then be easier to --

WD 07201—GPB—5,000—1-11-43

File No. of 194 . Mysore Traffic Board.

Serial No.

prescribe the type or types of charcoal gas plants that may be used in the State, and the issue of rules by the Govt. of Madras may perhaps be awaited.

2
18/11/41

Draw Secy)

2 (i). The issue of rules by the Madras Govt may be awaited

Minister for Law.)

Hm
2
22.11.41.

SECY. LAW DEPT.
20 NOV. 1941.
GOVT OF MYSORE.

OFFICE OF THE MINISTER FOR LAW
NOV 24 1941
No 5175

2') Draft rules were issued, I think.
Please urge for Fort St George Gazette

2
Hm
25/11

Hm
2
26/11/41.

2
26/11/41

3) Submitted with reference to para 2 4.

2 4) Copy of the Fort St. George Gazette Extraordinary notifying the rules applicable to gas producers installed in motor vehicles obtained from the Librarian submitted for favour of perusal.

5) Further amendments have also been issued to the above rules in Madras Fort St George Gazette dated 11th nov. 1941. The last date for receipt of objections or suggestions to the rules is 25th Nov. 1941.

6) If approved the file may be forwarded to the Director of Industrial Planning in Mysore for his perusal

Serial No.

and remarks in the first instance.

2) Submitted for orders with reference to paras 17 to 24. It is also necessary to ascertain the difference between the kind of model which was used for the Kirloskar motor model that has got to be approved for use in Mysore.

3/1.12.41

Sec.

3) The draft rules published in the Fort St. George Gazette Extraordinary are submitted for favour of -- perusal.

3 1) They will be forwarded to the Director of -- Industrial Planning for remarks with reference to the Minister's orders in para 3 as to the standard model that has got to be prescribed for use in Mysore. After receipt of his opinion, draft rules to be adopted for Mysore will be submitted for orders.

2 DEC. 1941 GOVT OF MYSORE

Law Dept.

2/12/41.

2/12/41

3.12.41.

U. O. No. T 15/40-42 dated 4.12.1941.

4/12/41

32) Forwarded with compliments to the Director of Industrial Planning in Mysore, for favour of remarks.

6/12/41

Contn. sheet.

WD 07201—GPB—5,000—1-11-40

Sir Safdar Imam

5.12.41

Secretary to Govt.

Law Department.

7) Use of producer gas plant 1338/TB

File No. of 194 . Mysore Traffic Board.

Seria No.

33) In the draft rules of Madras Govt, there is provision for a laboratory test at Guindy for a Provincial Transport Authority who will have to certify the fitness of the generator for use on the vehicle. In Mysore, this power may be delegated to a responsible officer who is also a mechanical Engineer. As it is only the testing of a model set of any manufacturer, I can do this work provided I can draw upon the services of a capable Boiler Inspector whenever I need his services. As regards laboratory test, this is for testing the quality of the gas produced by the generator. This may not be insisted upon except when there is a doubt as to the model appearing to be inefficient by other tests. The other rules may be adopted.

B S Mundaliar
16/12/41
Labour Commissioner and Director of Industrial Planning in Mysore.

Secretary, Law Dept
With Compliments

Hm
18-12-41

34) The remarks of the Director of Industrial Planning are for

REGY. LAW DEPT. 13 DEC. 1941. GOVT OF MYSORE

Use of Producer Gas plant.

M. T. B. F. 13]

Mysore Traffic Board | File No. 1338 of 194 .

Serial No.

favour of perusal. It may perhaps be desirable at this stage to ascertain from the provincial Transport authority Madras the model of the Gas plant approved by that authority and after receipt of reply further action may be taken for framing Rules for Mysore and on the Suggestion made by the Director of Industrial planning.

35) Submitted with a tentative draft for consideration.

SECY. LAW DEPT. 22 DEC. 1941 GOVT OF MYSORE

DEC 23 1941 6377

36) Submitted for favour of perusal & approval pl.

Law Secy) 2 23/12/41.

37) for perusal

Minister for Law) Hm 2 23.12.41.

38) 24/12/41

Hm 2 24.12.41.

39) Law 2 Jan

Issued no T. 2643 of 26.12.41 to the Secy. Central Type Bd Madras calling for certain information.

Letter no. L. Dis 148/42 of 9.1.42 from the Secy. Road Traffic Board

Use of producer gas plant —

1338, 2111/2358

File No. of 194 . Mysore Traffic Board.

Seria No.

Madras forwards list of producer gas plants approved by the Central Board.

40) Submitted with a draft amendment incorporating the Madras Rules relating to gas producers installed in Motor vehicles for ~~approval~~ consideration.

41) Copies of the draft will be forwarded to the I.G. of police and Director of Industrial planning for opinion as to whether the rules are suitable for adoption in Mysore, and action taken to have them published in view of their opinions

JAN 23 1942 No. 7614

'A'

SECY. LAW DEPT. 724 21 JAN 1942 GOVT OF MYSORE

Law Secy) 21/1/42

42) 'A' may be done

Minister for Law.) Hm 2 23.1.42.

3) Hm VS/1

Hm 2 26.1.42 2 VS/1

No. J. 3273-82 dt. 2.2.42 from the Secy. to Govt., I.G.P. & Dir. of Industrial planning forwards draft rules for opinion.

Letter no. J3-C. 463/41-42 dt. 4-2-42 from the Secy. to Govt. furnishing his opinion

45) Called for perusal. Replies from the other Secys. and the I.G.P etc will be awaited.

7.2.42 SV.

Use of Producer Gas plant. 10

M. T. B. F. 13]

Mysore Traffic Board | File No. 1338, 2111, 2359, 2434, 2455 of 194 .

Serial No.

No. T.C. 169/41-42 & 12.2.42 from the D. G. P. States that Rules re. producer Gas plant are suitable.

46) Submitted for perusal. Replies from other Dist. mags & particularly from the Dir of Industrial planning are yet to come. After receipt of reply from the latter the file will be further worked up for issue of the rules.

16.2.42 SG.

47) Yes.
16/2/42

Letter G.2-145/41-42 & 19.2.42 from the Dist mags mysore States the Rules are all right.

48) Submitted for favour of perusal.

19.2.42 SG.

19/2/42

P-118 & 9.2.42 from the Dir. of Information Bombay re the matter approved Specifications of producer Gas plants.

49) The circular is for favour of perm

50) It is for consideration and orders if

(i) a copy of approved Specifications ma be obtained from the Dir. of In tries Bombay; and

(ii) any action is necessary i regard to reduction of tax in respect of vehicles

Use of Producer Gas Plants —

2455, 2479

File No. of 194 . Mysore Traffic Board.

OFFICE OF THE MINISTER FOR LAW
FEB 26 1942
No. 8548

Seria No.

fitted with Gas Plants by way of encouragement proposed to be as is done in Bombay. Vide paras 4 & 5 after the rules relating to installing producer Gas Plants on motor vehicles come into force in Mysore.

5(1) It may be submitted in this connection that removal of the mileage cut consequent upon fitting a bus with Gas plant has been found to be a good incentive to proprietors of bus services put up the plant to their vehicles.

Submitted for orders.

23-2-42
SG.

(Draw Sirry)

24/2/42.

SECY. L... 24... GOVT O...

5(2) For perusal

(Minister for Law.)

Hm
24.2.42

24/2/42

5(3) Please get a copy of the Specifications

Hm
24/2

Hm
26/2/42

26/2/42

5(4) Draft submitted for approval.

28/2

Use of producer Gas plants for Motor Vehicles.

(12

M. T. B. F. 13]

Mysore Traffic Board | R.T. File No. of 194 /.

Serial No.

Issued no. T. 3592 dated 3.3.1942 to the Provincial Transport Authority Bombay calling the Specifications etc of approved Gas plants.

No. J.2.L.2491 dated 21.2.1942 from the Dist. Magte. Chitaldrug States that the draft rules proposed are suitable.

No. I.P 31 (30) 41.42 dated 24.2.1942 from the Director of Industrial planning. States that the rules are suitable but the date be fixed at 15th March as 1st march is too early

Letter No. L. Dis. J.4. C.961/41.42 dated 27.2.1942 from the Dist. magte. Kola forwards certain rules as suggested by the Pass Inspector Kolar.

56) The letters of the Director of Industrial Plann and the Dist magts of Chdrug & Kolar are for favour of perusal.

57) The draft rules were forwarded to the I.G. of police, Dir of Industrial planning & the Dist magts. The Director of Industrial planning & the I.G. of police, the Dist magts of Mandya, Mysore, Chitaldrug & Kolar are of the opinion that the rules are suitable for being adopted in Mysore. The amend

WD 07201—GPB—5,000—1-11-40

17) Use of producer gas Vehicles
Rules re —— 2531 2548

R.T. File No. of 1941. Mysore Traffic Board.

Seria No.

rents suggested by the Pons Inspector Kolar may e forwarded to the I. G. P & Director of Industrial Planning for opinion. In the meanwhile it is for orders if the draft rules may issue.

Submitted for orders.

13

58) The draft rules may issue now.

58, The suggestions made by the Bus Inspector of Kolar may be considered along with other suggestions or objections that we may receive after the draft rules are published.

6/3/42

MAR 13 1942 9104

SECY. LAW DEPT. 599 GOVT OF MYSORE

Law 6)

59) May be approved

Minister for Law) Hm 2 13.3.42

60) In view of the present situation the possibility of buses & lorries being required for Defence Services, further action about charcoal gas plant may be deferred

13/3

14/3

Letter no. H.B.I. 4 dt 20.2.42 from the Govt. Trans. Kar. States that Bombay rules are suita-

No. 852-T/IV/1428 Dated 7.3.1942 from the provincial Transport authority Bombay forwards leaflet relating to "Standard Specification for charcoal Gas producer for motor vehicles.

Standard Specification for charcoal

Charcoal/Gas producer for motor vehicles → IH

M. T. B. F. 13]

Mysore Traffic Board

Rules re 2548, 2562, 2597

R.T. File No. of 194 /.

Serial No.

Gas producer for motor vehicles in Bombay province is submitted for favour of perusal with reference to orders in para 53 supra.

No action seems to be necessary at present in view of the orders passed in para 60 above. The file may be closed at this stage.

Submitted for orders.

Maybe closed

16/3/48

16/3/48

(1)

Industries - Major Industries - Motor Vehicles - Producer gas plant - Committee Report submitted.

G.O.No.Ms.1646, Development Department, dated 8-9-1941.

CONSTITUTION OF THE COMMITTEE.

Mr. J.S.Brown, G.I.E., I.C.S.,
Member, Board of Revenue, CHAIRMAN.

Mr. P. Reid of Messrs. Simpson & Co.,

Mr. H.R. Dogra,
Retired Chief Enginaer to
the Government of Madras.

Mr. E.G. Salter of Travancore.

Mr. T.S. Krishna of Messrs.T.V.Sundram Ayyangar & Sons, Madura.

Mr. B.G. Appadorai Mudaliar of Mysore.

Mr. V.K.A. Menon of Cochin.

Mr. W.G. Dyson,
Chief Conservator of Forests,
Madras.

Mr. E.W. Bouchier, I.C.S.,
Secretary,
Central Road Traffic Board,
Madras. SECRETARY.

The Committee was assisted by

Mr. W.Simmons of the Anamallais Ropeway Company.

TERMS OF REFERENCE.

The Government have decided to constitute a Committee to advice them - - - - more distant future."

REPORT OF THE COMMITTEE.

We have the honour to submit the report for which the Government asked in their order MS-No.1646, Development Department, dated 8-9-41.

We met on the 15th, 16th, 17th and 18th of September. We inspected vehicles fitted with producer gas plants of the following makes:-

of the following makes:-

Messrs. Simpson & Co., Madras.
" T.V.Sundram Iyengar & Sons, Madura.
P.S.S. Madura.
The Federal Gas Producer Company, Madras.
Radhakrishna Motor Works, Madras.
Travancore State Transport Department.
A.A.Shembaga Nadar, Madura.
G.N.Chakrapany Chetty & Sons. Madura.

and visited the workshops of Messrs. Simpson and Co., Madras.

Our conclusions and recommendations are unanimous except on the question of overhang.

Item a (1) of the terms of reference.

The number of vehicles fitted with producer gas plants is increasing rapidly. A large proportion of the plants are made by reputable firms but there is evidence to show that persons with no special qualifications are now engaged in this business and are producing inferior plants. We consider it essential that suitable specifications should be prescribed for producer gas plants, and suggest the following:-

SPECIFICATIONS FOR GAS PRODUCERS FOR MOTOR VEHICLES.

1. Scope. These specifications apply to gas producers as installed on motor vehicles.

2. Definition. The term "Producer" shall mean the whole of the equipment necessary for the generation of producer gas and its utilisation in the engine of the vehicle.

3. Materials of construction. All materials used in the construction of the producer shall be suited to the load, temperature, chemical and ~~suited-to-the load~~, other conditions for which they are used and shall

shall be such as will last under reasonable conditions of operation and maintenance, for two years or more, excepting any component parts that may be expressly excluded by the manufacturer in his guarantee.

4.Design.

(a) General. The producer shall be of simple design and construction and shall be arranged in such a manner on the vehicle as not to interfere with the steering and road safety of the vehicle and the driver's range of vision. The arrangement of the equipment shall be such as not unduly to impair the pay-load space and the weight distribution of the vehicle.

(b) Lay out. Every part of the equipment shall be installed outside or underneath the body of the vehicle. If the body constructed requires that some part of the producer be inside the body of the vehicle the outside of the said part shall be further covered to prevent any ill effect from gas leakage or inconvenience due to excessive heat.

(c) Dimensions. The overall dimensions of the vehicle, with the producer installed, shall not exceed those permitted under the Madras Motor Vehicles Rules 1940.

(d) Weight. The weight of the producer shall be a minimum, having regard to the requirements of strength, rigidity, resistance to high temperature and corrosion, and the type of vehicle to which it is to be fitted.

(e) Hopper Capacity. The effective capacity of the fuel hopper shall give the vehicle an operating distance of not less than 50 miles without recharging.

(4)

(f) Accessibility. The producer shall be designed with a view to accessibility and ease of maintenance, cleaning, charging, and ash removal. Provision for drainage shall be made where necessary.

Cleaners using solid filter material shall be installed on the vehicle in such a manner as to allow efficient and convenient packing of the filter material.

(g) Fitting. All installations shall be securely mounted. The installation should not form a single inflexible unit but should be connected with flexible pipe couplings at appropriate points to relieve intermediate stresses.

(h) Safety. Precautions shall be taken by the manufacturer to ensure safety with special regard to fire risk, gas poisoning and blow back of hot charcoal.

All equipment and piping shall be free from gas or air leaks.

Covers of the furnance and gas filters and packings should be airtight. If a generator vent pipe is fitted the pipe shall be connected directly to the furnace or should branch from a pipe as near as possible to the furnace. If an escape funnel is provided for use during the air blowing operation the pipe shall exhaust above the roof level.

Exposed surfaces at high temperatures shall be screened against accidental contact.

The compartment containing the generator should be lined with asbestos or other heat resisting material not less than $\frac{1}{4}$" thick in the agrregate and the generator should be kept away from any part of the body by at least one inch.

In the instructions issued by vendors to purchasers

(51)

purchasers of producers regarding the use of the ~~plug~~ plant, ~~instructor~~ instructions should be included to the effect that garages and buildings in which producer gas vehicles may be housed shall have permanent ventilation in addition to doors and windows that may be opened.

(i) Capacity of cleaners. The generator and cleaning system shall be so designed that they will operate for not less than 50 miles without requiring attention or cleaning.

(j) Clearance. The road clearance at the bottom of the furnace shall be not less than 12 inches when the vehicle is unladen with the hopper full.

5. Workmanship.

(a) General. The construction and installation shall be carried out in a thoroughly workmanlike manner and in accordance with the best industrial trade practice.

(b) Piping. All piping shall be of substantial and gas tight ~~as~~ construction and provided with such joints as are necessary for the effective maintenance and repair of the vehicle. Every joint or weld shall be strong, and of sound workmanship.

6. Painting. All parts except those exposed to high temperatures shall be suitably painted, and parts exposed to high temperatures shall be painted with a satisfactory heat resisting paint.

7. Performance. The performance of the vehicle when running on gas alone shall comply with the following requirements:-

following requirements:-

Starting Test. The time required for starting the vehicle shall not exceed 15 minutes.

Speed. The vehicle shall be capable of maintaining the following speed, on level roads:-

(a) Stage carriages - loaded 22-28 M.P.H.

(b) Goods vehicles not falling under the definition of heavy transport vehicle. - loaded 22-25 M.P.H.

8. Marking. A plate containing the maker's name and serial number of the plant shall be attached to every plant and exhibited in a conspicuous place for easy inspection.

9. Saving. These specifications do not apply to producers in use before .....

In drawing up these specifications we have followed the specifications issued by the Department of Supply and Development in Australia, with certain additions on matters relating to safety, and some omissions. The Australian specifications provide for a gas temperature test and a dust test. These we have omitted for the reasons stated below. For the Australian power test which requires the use of the dynamometer, we have substituted a simple speed test.

The specifications suggested above relate mainly to the safety and convenience of passengers and efficiency of the public service. We are also asked to consider what degree of control is necessary for the fitting of these plants in view of the desirability of ensuring that there is no such wear and tear on the engine as will involve unnecessary wastage in the present restricted supply of motor vehicles. We find that in producer gas

(7)

gas operation as compared with petrol there is more wear and tear in certain components, which appears to be inevitable at present even under efficient management. We do not consider that this need be taken as serious provided that suitable measures are adopted to ensure that wear and tear are reduced to a minimum. This problem resolves itself into the question of applying tests of standards of purity to the gas which enters the combustion chamber after passing through cleaning and filtration systems. We consider that the question must be decided in a laboratory. The firms making these plants in Madras are not in a position to make the necessary tests themselves or to furnish sufficient material at present for determining standards. They are concerned mainly with results and they can produce plants which in actual operation over a long period have proved efficient and satisfactory so far as engine wear is concerned. We recommend that the following firms, Messrs. Simpson & Co. Ltd., Madras, Messrs. T.V.Sundaram Iyengar & Sons, Ltd., Madura, Messrs. Addison & Co., Ltd., Madras, and Messrs. Rajagopal Motor Works, Madras, should be asked to submit plants for test in the laboratory of the Presidency College, Madras. Messrs. Addison & Co., are agents for the sale of the gas plants manufactured by the Travancore State Transport Department. We believe that these firms will gladly co-operate and that they will welcome any investigation made with a view to evolving measures to minimise engine wear and arising from the use of producer gas. The gas produced by these plants would be tested and analysed with particular reference to its purity and temperature and chemical composition. It may then be possible on the basis of the results so obtained to prescribe minimum acceptable standards and to devise

devise practicable methods of conducting the necessary tests which could be readily applied by the manufacturer or the Inspector. We have mentioned the Australian Gas temperature and dust tests. One of the objects of the investigation we propose would be to examine the question of applying similar tests in India.

We consider that from such data as may be prescribed only models approved by a specified authority should be allowed. Approval should be given for a particular model made by a particular manufacturer. We recommend the following rules:-

1. Every producer gas plant fitted to a vehicle on or after _____ shall be of a model approved by the prescribed authority. Every such plant shall exhibit in a conspicuous place, a plate containing the maker's name and the serial number of the plant and the mark assigned to the model by the prescribed authority.

2. Every maker seeking approval for a producer gas model shall submit specifications and drawings of the design he proposes to manufacture to the prescribed authority. He shall undertake to submit his plant to a laboratory test, and to rpoduce a bus or lorry fitted with the plant at such time and place as the prescribed authority may appoint. The tests to be applied shall include a road test of not less than 50 miles continuous run, for each new design. Every modification in an approved model shall be reported to the prescribed authority who may require such test as he thinks necessary, before applying the modification.

We recommend that the plant should be located, on a bus, at the rear in such a position as to cause as

as little interference as possible with the weight distribution. On a lorry, the plant may be located either at the rear as prescribed for buses, or at the front. If the plant is located at the front, it should be fitted behind the driver's cab in such a position as not to interfere with visibility or signalling. Rear mounting on lorries is usually unsuitable as it intereferes with loading, but would allow it as optional. We see no difficulty in the application of the rules regarding signalling, visibility to the rear, and over-all dimensions. We are not agreed on the question of overhang. The existing limit is 40% of the wheel-base. Mr. Saltar and Mr. Reid see no adequate reason for fixing it as low as this and suggests that it should be raised to 50% as it has been in Great Britain. They consider that bus owners should be compensated by the extra length for the loss of the passengar space occupied by the generator. Messrs. Appadorai Mudaliar, T.S.Krishna and V.K.A.Menon would allow an extension, for the plant alone, upto a limit of 50% total overhang in order to enable the plant to be fitted wholly or mainly outside the body. The rest of the Committee see no reason, why any special extension over the long established limit should be granted for producer vehicles only.

Every transport vehicle requires a certificate of fitness prior to registration and every six months thereafter. The vehicle is also liable to inspection apart from the regular certificate of fitness - inspection at all reasonable times.

When a vehicle is fitted with a producer gas plant, the owner has to report the alteration under section 32 of the Motor Vehicles Act, 1939. We consider.

(10)

consider that the vehicle should be invariably inspected and tested before the alteration is recorded. We believe that in practice this is usually done, but it is not compulsory. Subject to this addition, we consider that the existing provisions regarding inspection will be sufficient for the purposes mentioned by the Government.

There are Motor Vehicle Inspectors in most of the districts. We recommend that the Inspectors should be given a fortnight's training, with an approved firm, in the construction and the use of producer gas plants. With this training, the existing staff should be adequate in these districts. In other districts, the District Superintendent of Police does the inspection work. He may not have adequate technical knowledge and may be too busy with his other duties to devote sufficient time to the inspection of the gas plants. We consider that there should be a Motor Vehicles Inspector for each district. The lighter districts might perhaps be grouped.

We also recommend the appointment of a Chief Inspector of Motor Vehicles for the Presidency. He would control the local Inspectors, act as a technical adviser to the Central Road traffic Board and the Government, and would be generally responsible for the measures to be adopted to control the use of producer gas plants, so far as the technical aspect is concerned. We suggest that a public works department Officer with special qualifications in Mechanical Engineering would be suitable.

We consider that the appointment of a Chief Inspector is essential. There is at present no technical Officer, or body, to exercise the necessary control.

(11)

Item No.5: The Statement below shows the number of Producer Gas Buses and Lorries in the Madras Presidency, at different periods.

	Buses.	Lorries.
1-12-1940	227	14
1- 6-1941	582	51
1-7-1941	630	63
1- 8-1941	708	66
1- 9-1941	1064	80

The marked increase in August was due to petrol Rationing. The policy adopted, for Buses, was to eliminate petrol driven Vehicles running on the less essential routes and to allow them back when fitted with a Producer Gas Plant.

We estimate that, if adequate supplies of Charcoal are available, the number of Producer Gas Vehicles will increase at about the following rate:-

Total on 1st September	..	1144
Estimated total on 1st October	..	1500
" 1st November	...	1900
" 1st December	..	2350
" 1st January	..	2800
" 1st February	..	3300
" 1st March	..	3800
" 1st April	..	4300

The rate of increase is well within the productive capacity, but some of the leading firms have markets outside Madras which they are naturally anxious to serve. We think, from the point of view of the Transport Authorities, a higher conversion rate would give rise to considerable difficulties in the regulation of transport services.

There are approximately 3,900 buses and

(12)

and 1,500 Goods Vehicles in the Presidency, which gives a total of 5,400. We consider that, allowing for goods vehicles which fall in the light van class, for buses and lorries running on ghat roads, and for vehicles which are too old for conversion, the process of conversion will stop at about 4,300, and we take this figure as the estimated total of Producer Gas Vehicles which may be expected in the near future.

We have qualified our estimate of the rate of increase by a reference to fuel supplies. This question is discussed in our answer to item (b). We find it necessary for reasons which are explained later, to recommend that the process of conversion should be slowed down with effect from the beginning of the next rationing period, i.e., 1st November and spread over a longer period. We suggest that this should take effect from 1st November as the rate of conversion depends very largely on the number of buses eliminated by the Traffic Boards, in accordance with their Rationing Schemes, and the Schemes for the first period have already been put into operation. It should not be difficult for the Traffic Boards, with the co-operation of the manufacturers to control the rate of increase fairly closely. The rate which we suggest should be adopted is,

1st September		..	1144
1st October		..	1500
1st November		..	1900
1st December		..	2200
1st January	1942	..	2500
1st February	"	..	2800
1st March	"	..	3100
1st April	"	..	3400
1st May	"	..	3700
1st June	"	..	4000
1st July	"	..	4300

We assume that adequate supplies of material will be available, but there may be difficulties and we recommend that the Government use their good offices to secure supplies for manufacturers of approved model.

Item No.6: The rate of charcoal consumption may be taken as 1½ lbs. graded, or 2 lbs. ungraded, per mile. A slightly lower consumption rate is possible, with careful management, but the figures we suggest may be taken as a fair average. We take the average daily mileage of a bus or lorry to be about 85, allowing for the fact that every bus or lorry has to be taken off the road, at times, for overhaul and inspection.

We are asked to consider the economic advantage or disadvantage of the use of producer gas plants. The advantage is a substantial reduction in operating costs. The comparative fuel costs at present prices are approximately 6 — 7 pies per mile for a producer gas bus and 1 anna 9 pies to 2 annas for a petrol driven bus. The difference is offset to some extent by other factors. Two of the Members of the Committee, who have experience of operating both petrol and gas buses over a long period have given us useful information regarding their total operating costs. They are,

a) Producer Gas 2 annas 10 pies a mile.
Petrol 4 annas 5.75 pies a mile.

These figures are based on a mileage of 5,62,000 (producer gas) and 4,63,000 (petrol).

b) Producer gas 3 annas 5 pies a mile.
Petrol 4 annas 10 pies a mile.

(14)

The Chief Conservator of Forests informs us that the cost of operating a Forest Department lorry on producer gas is 3 annas 11 pies a mile. We are satisfied that there is a definite economic advantage of 1 to 1½ annas a mile saving in operating costs in the use of Producer Gas Plants.

The disadvantages are, (a) loss of power and loss of passenger or loading space. We do not think these are serious disadvantages. With the present speed limits of 30 miles per hour for buses and 25 miles per hour for lorries, the loss of -- power is immaterial. Loss of passenger space, which may be taken as 2 seats out of 21, is a drawback, but operates only when the vehicle is loaded to capacity. There is also, a corresponding reduction in taxation, when seating capacity is reduced. (b) Extra wear and tear. There is obviously no advantage in reducing costs, if it means wearing out parts which cannot under present circumstances be readily replaced. Wear may be considerable, unless proper attention is given to the construction and maintenance of the plant. It can be reduced to a minimum with proper safeguards which we expect, will be devised as a result of the laboratory test which we have proposed above.

(c) Increased Insurance premia owing to extra fire-risk. This, again, may be reduced with proper control.

It must be remembered, in any comparison of operating costs, that the price of petrol has increased owing to the war and that petrol now pays a duty of 12 annas a gallon and, in Madras a Sales

(157)

Sales Tax of 1 anna 6 pies. We feel bound to point out that, if there is a substantial fall in the price of petrol or if additional tax is imposed on Producer Gas Vehicles the economic advantage, which producer gas enjoys at present will disappear.

7. (a) Anthracite, Coke, and raw timber are possible alternatives but their use requires further investigation. Madras appears to have concentrated on developing the use of charcoal. Charcoal is suitable, but in this as in other matters connected with the use of Producer Gas there is room for further research. We suggest that the possibility of making charcoal briquettes for use in Producer Gas plants should be examined. It is understood that the Badravathi Iron Works, Mysore, can supply useful information regarding manufacture of briquettes.

(b) We estimate that there will be about 4,300 Producer Gas Vehicles in use in the near future in the Presidency. They will consume a total of approximately 7,500 tons of charcoal per month, which will need the outturn of about 4,500 acres of National Fuel Forest a year. Failure to meet this large new demand will have serious consequences for road transport and will endanger the supplies of fuel for normal purposes. We recommend that as large a part as possible of the demand should be met from reserved forest. We understand from the Chief Conservator of Forests who has been examining this question that the Forest Department reserved forests should be able to produce by leasing fuel ~~coupes a~~ Coupes a total of approximately 1,000 tons a month by the beginning of next

next year and that this figure might be stepped up to a maximum of 2,500 tons a month by about June 1942. There appears to be no prospect of reserved forest producing more than 2,500 tons a month until future plantations have been built up which will take at least 7 or 8 years. It is evident in the light of these figures that the greater part of the demand will have to be met from other sources. We understand that Travancore and Mysore might help - (the Mysore Representative mentioned a figure of 1,000 tons a month) but there appear to be difficulties in regard to transport. We suggest that the question of obtaining supplies from these States should be examined in consultation with the respective Governments. It is clear that for the time being the greater part of the demand will fall upon private forests. We do not know what the capacity of these forests is or what are the prospects of working them successfully. We recommend that an attempt should be made now to obtain an estimate of the charcoal potentialities of private forests. We realise that it would be difficult and that the estimate might not be entirely reliable, but it would serve to throw some light on a question which has now assumed considerable importance. In view of the uncertainty regarding charcoal supplies we find it necessary to recommend that the rate of conversion should be slowed down, as suggested above. If enquiry shows that adequate supplies of fuel are available the rate could be increased, or, conversely, it could if necessary be further restricted.

It has been represented to us that the ordinary indegenous methods of producing charcoal are

(17)

are wasteful and do not give the best quality of fully carbonised charcoal. We realise the disadvantages but see no practicable alternative for general use. Portable kilns might be used in special areas but the high price of material and the difficulty of obtaining it, rule out the possibility of using such kilns on a large scale.

It will be necessary, on the supposition that the use of producer gas will continue as a permanent development to build up assured sources of supply by laying down new plantations which would be earmarked for charcoal production. The Chief Conservator of Forests estimates that 6000 acres of new plantation per year, on a 10 year rotation, would be required to supplement the diminishing resources of natural forests and to discourage their excessive exploitation of such forests. The Forest Department could probably work up to about 50% of this, in three years, as follows:-

1st year	..	500 acres.
2nd year	..	1500 acres.
3rd year	..	3000 acres.

It might be necessary for the Department to acquire suitable land for casuarina plantations.

There would still remain a large demand to be met from other sources and we recommend that the Government should encourage the development and replanting of private plantations.

We are unable to make a complete survey of fuel sources, actual and potential, as adequate information is not at present available but it is evident that the question calls for thorough investigation and careful planning.

(18)

General.

We wish to make it clear that our recommendations are not in any way intended to rule out the possibility of further development and modification in the construction and use of producer gas plants. Producer gas has established itself in South India as a satisfactory and reasonably efficient means of operation but there is still room for further research, and improvement.

Acknowledgements.

We wish to record our thanks to Mr. Simmons, for his assistance, and to Mr. Walker, Manager of the Anamallais Ropeway Company for placing the services of Mr. Simmons at our disposal;

to Mr. Salter, for the information, he has supplied regarding Australian Specifications and Tests; and to the following Associations and Firms who have submitted Memoranda for our consideration:-

1. The Indian Roads and Transport Development Association, Madras.
2. The Madras Motor Vehicles and Allied Merchants Association, Madras.
3. Messrs. Simpson & Co., Ltd., Madras.
4. " Addison & Co., Ltd., Madras.
5. " T.V. Sundram Iyengar & Sons, Madura.
6. " Ford Motor Co., Ltd., Madras.
7. " Rajagopal Motor Works, Madras.
8. " United Motors (Coimbatore) Ltd., Combatore.
9. The Provincial Bus Owners' Association, Madras.
10. The Standard Vacuum Oil Co., Madras.
11. The Burmah Shell Oil Co., Madras.

"Copy"

B.H. Wadia
14.9.41
Director

Use of Producer Gas Plant by Motor Vehicles

Madras Government's Instructions

MADRAS, Sept. 30.

THE Madras Government have issued the following Press communique:

On July 24 1941, Government issued a Press communique to the effect that they had in view the encouragement of the use of producer gas by motor vehicles and published some details on this form of locomotion for the information of the general public.

On the recommendation of a committee appointed to report on this subject, the Government have issued the following instructions which will come into force from Oct. 15. 1941.

With effect from that date every producer fitted to a vehicle shall satisfy certain specifications, the details of which can be had from the Secretary, Central Road Traffic Board, Madras, and shall be of a model approved by the Provincial Transport Authority, and made by a manufacturer approved by such authority.

Every such producer shall exhibit in a conspicuous place a plate containing the maker's name, and the serial number of the producer, and the mark assigned to the model by the Provincial Transport Authority.

Laboratory Test

Every maker seeking approval for a producer model shall submit specifications and drawings of the design he proposes to manufacture to the Provincial Transport Authority. He shall undertake to submit his model to a laboratory test, and produce a bus or lorry fitted with the plant at such time and place as may be fixed by the Provincial Transport Authority or by such officer as that authority may depute in this behalf.

The tests to be applied shall include a road test of not less than 50 miles continuous run, for each new design. Any modification proposed in an approved model shall be reported for approval to the Provincial Transport Authority which may require such test as it thinks necessary before approving the modification.

The generator should be located on the bus at the rear, in such a position as to cause as little interference as possible with the weight distribution On a lorry the generator may be located either at the rear as prescribed for buses or at the front. If the generator is located at the front it should be fitted behind the driver's cab in such a position as not to interfere with visibility or signalling. Regarding signalling, visibility to the rear and over-all dimensions, the Madras Motor Vehicles Rules should be followed.

Submitted for kind information.

9/10/41

20 C.21 Mil. 1/2/43

Appendix F G—1]

SUBJECT..... Use of Producer-Gas Plant by motor Vehicles.

Section R.T

File No. 75-45

Serial No. 2

Diary No. of letter replied to.....

No. T 16.83/41-42 & 13.10.4

To

The Secy., Central Road Traffic Board Madras.

General and Revenue Secretariat

( )

the *19* .

Date of issue.....

Signed by.....

Sir,

With reference to the Madras Government Communique on the above subject, I am directed to request that I shall be greatly obliged if you will kindly send a copy of the rules and instructions issued

List of enclosures.....

Copied by.....

Examined by.....

in that behalf and the
Specifications pursuant,
the model which is
approved and the
names of those and
inspectors that have
been previously for
safeguarding the safe
and efficient working
of such plants.

The favour of an
early reply is requested.

I have etc.

Secy to T.B

by

M. T. B. F. 11

MYSORE TRAFFIC BOARD.

211

OFFICE OF THE SECRETARY,
~~OLD PUBLIC OFFICES~~.

No. T. 1683 /41-42

Dated Bangalore, ...13th October *194* 1.

RT 75-41-2

FROM

The Secretary, Mysore Traffic Board,
BANGALORE.

To

The Secretary,
Central Road Traffic Board,
Chepauk, MADRAS.

SIR,

Subject:- Use of Producer Gas Plant by Motor Vehicles.

With reference to the recent Madras Government Communique on the above subject, I am directed to state that I shall be greatly obliged if you will kindly send a copy of the Rules and instructions issued in that behalf and the specifications prescribed, the model which is approved and the nature of test and inspection that have been prescribed for safeguarding the safe -- and efficient working of such plants.

The favour of an early reply is requested.

I have the honour to be,

Sir,

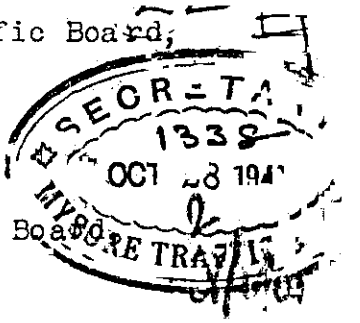
Your most obedient servant,

12/10/41

Secretary,
Mysore Traffic Board.

CSG:2.

Office of the Central Road Traffic Board,
Chepauk, Madras.



FROM

[illegible] 13-41-3

E.W.Bouchier, Esq., I.C.S.,
Secretary, Central Road Traffic Board,
Chepauk, Madras.

TO

The Secretary, Mysore Traffic Board, Bangalore.

..Dis.R.No. 10624/41. dated 23rd October, 1941.

Sir,

Sub:-Motor Vehicles-Use of producer gas plant.

Ref:-Your letter T.1683/41-42, dated 13--10--41.

With reference to the letter read above, I am to enclose herewith a copy of G.O.No.1768, Development, dated 27-9-41 and to state that the Special Rules to be issued are under consideration of Government.

EW Bouchier
Secretary.

Encl:- 1 G.O.

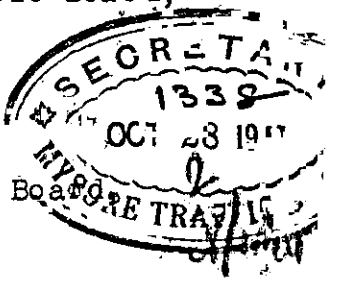
A.25.10.

BNB 25/10

Office of the Central Road Traffic Board,
Chepauk, Madras.

KT

RT 75-41-3



E.W.Bouchier, Esq.
Secretary, Central Road Traffic Board,
Chepauk, Madras.

The Secretary, Mysore Traffic Board, Bangalore.

..Dis.R.No. 10624/41. dated 23rd October, 1941.

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Ref:-Your letter T.1683/41-42, dated 13--10--41.

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E W Bouchier
Secretary.

Encl:- 1 G.O.

A.25.10.

GOVERNMENT OF MADRAS.

Received.....1941 Registered 1941.

SUBJECT:

INDUSTRIES - Major industries - Producer Gas Plant for Motor Vehicles - Committee's recommendations - Orders pass:

DEVELOPMENT DEPARTMENT.

G.O.No. Press 1768 Dated the 27th Sep. 1941.

Read the following papers:-

Again G.O.No.1646, MS., Development, dated 8th Sep. 1941.

Also From the Chairman, Producer Gas Plant Committee dated the 19th September 1941.

O R D E R:

In G.O.No.MS.1646, Development, dated the 8th September 1941 the Government constituted a Committee to advise them on various matters connected with the use of producer gas plant on buses and lorries. The Committee has now submitted its report.

2. As the number of vehicles fitted with producer-gas plant is increasing rapidly without adequate control and as it has been brought to the notice of the Government that some at least of the producers used for the purpose are of inferior quality, the Government agree with the recommendation of the Committee that only models approved by a specified authority should be allowed on or after a prescribed date. They are accordingly pleased to direct that with effect from 15th October 1941 approval will be given only to such models as satisfy the specifications detailed in the annexure to this order. The following directions should be observed in this regard:-

(1) Every producer fitted to a vehicle on or after 15th October 1941 shall be of a model approved by the Provincial Transport Authority and made by a manufacturer approved by such authority. Every such producer shall exhibit in a conspicuous place on the generator a plate showing in addition to the maker's name and serial number the mark assigned to the model by the Provincial Transport Authority.

(2) Every maker seeking approval for a producer model shall submit specifications and drawings of the design he proposes to manufacture to the Provincial Transport Authority. He shall undertake to submit his model to a laboratory test, and to produce a bus or lorry fitted with the plant at such time and place as may be fixed by the Provincial Transport Authority or by such officer as that authority may depute in this behalf. The tests to be applied shall include a road test of not less than 50 miles continuous run, for each new design. Any modification proposed in an approved model shall be reported for approval to the Provincial Transport Authority which may require such test as it thinks necessary before approving the modification.

(3) The generator should be located on a bus at the rear

in such a position as to cause as little interference as possible with the weight distribution. On a lorry the generator may be located either at the rear as prescribed for buses, or at the front. If the generator is located at the front, it should be fitted behind the driver's cab in such a position as not to interfere with visibility or signalling. Regarding signalling, visibility to the rear and over-all dimensions, the Madras Motor Vehicles Rules in this regard should b e followed.

(4) When a vehicle is fitted with producer gas plant, it should invariably be inspected and tested b efore the alteration is recorded in the certificate of registration under section 32 of the Motor Vehicles Act, 1939.

The necessary rules under the Motor Vehicles Act, 1939 will be issued separately.

4. Orders on the Committee's other recommendations will be issued separately.

5. The Government desire to express their thanks to the Chairman, Secretary and Members of the Committee for their prompt and valuable report.

(By Order of His Excellency the Governor)

C.P. Karunakara Menon,
Secretary to Government.

To the Chairman and Members of the Committee.
" " Secretary, Central Road Traffic Board.
" " Home Department.
" " Director of Industries and Commerce.
" " Chief Conservator of Forests.
Press.

****

ANNEXURE.

SPECIFICATIONS FOR GAS PRODUCERS FOR MOTOR VEHICLES.

. SCOPE. These specifications apply to gas producers as installed on motor vehicles.

. DEFINITION. The term "Producer" shall mean the whole of the equipment necessary for the generation of producer gas and its utilisation in the engine of the vehicle.

. MATERIALS OF CONSTRUCTION. All materials used in the construction of the producer shall be suited to the load, temperature, chemical and other conditions for which they are used and shall be such as will last under reasonable conditions of operation and maintenance, for two years or more, excepting any component parts that may be expressly excluded by the manufacturer in his guarantee.

. DESIGN. (a) General. The producer shall be of simple design and construction and shall be arranged in such a manner on the vehicle as not to interfere with the steering and road safety of the vehicle and the driver's range of vision. The arrangment of the equipment shall be such as not unduly to impair the payload space and the weight distribution of the vehicle.

(b) Lay out. Every part of the equipment shall be installed outside or underneath the body of the vehicle. If the body construction requires that some part of the producer be inside the body of the vehicle the outside of the said part shall be further covered to prevent any ill effect from gas leakage or inconvenience due to excessive heat

(c) Dimensions. The over-all dimensions of the vehicle, with the producer installed, shall not exceed those permitted under the Motor Vehicles Rules, 1940.

(d) Weight. The weight of the producer shall be a minimum having regard to the requirements of strength, rigidity, resistance to high temperature and corrosion, and the type of vehicle to which it is to be fitted.

(e) Hopper Capacity. The effective capacity of the fuel hopper shall give the vehicle an operating distance of not less than 50 miles without recharging.

(f) Accessibility. The producer shall be designed with a view to accessibility and ease of maintenance, cleaning, charging and ash removal. Provision for drainage shall be made where necessary.

Cleaners using solid filter material shall be installed on the vehicle in such a manner as to allow efficient and convenient packing of the filter material.

(g) Fitting. All installations shall be securely mounted. The installation should not form a single inflexible unit but should be connected with flexible pipe couplings at appropriate points to relieve intermediate stresses.

(h) Safety. Precautions shall be taken by the manufacturer to ensure safety with special regard to fire risk, gas poisoning and blow back of hot charcoal.

All equipment and piping shall be free from gas or air leaks.

Covers of the furnace and gas filters and cocks and packings should be air-tight. If a generator vent pipe is fitted, the pipe shall be connected directly to the furnace or should branch from a pipe as near as possible to the furnace. If an escape funnel is provided for use during the air blowing operation, the pipe shall exhaust above the roof level.

Exposed surfaces at high temperatures shall be screened against accidental contact.

The compartment containing the generator should be lined with asbestos or other heat resisting material not less than ¼" thick in the aggregate and the generator should be kept away from any part of the body by at least one inch.

In the instructions issued by vendors to purchasers of producers regarding the use of the plant, instructions should be included to the effect that garages and buildings in which producer gas vehicles may be housed shall have permanent ventilation in addition to doors and windows that may be opened.

(i) Capacity of cleaners. The generator and cleaning system shall be so designed that they will operate for not less than 50 miles without requiring attention or cleaning.

(j) Clearance. The road clearance at the bottom of the furnace shall be not less than 12 inches when the vehicle is unladen with the hopper full.

5. WORKMANSHIP.

(a) General. The construction and installation shall be carried out in a thoroughly workmanlike manner and in accordance with the best industrial trade practice.

(b) Piping. All piping shall be of substantial gas tight construction and provided with such joints as necessary for the effective maintenance and repair of t vehicle. Every joint or weld shall be strong, and of workmanship.

6. PAINTING. All parts except those exposed to h natures sha[illegible] painted, and parts exposed to temperatures shall be painted with a satisfactory heat paint.

7. PERFORMANCE. The performance of the vehicle r[illegible] shall comply with the following re

[illegible] The time required for starting t veh[illegible]

[illegible] capable of maintain levels [illegible] prescribed for differ class[illegible]

8. [illegible] containing the makers serial [illegible] shall be attached a pr[illegible] mounted in a conspicuous place for easy pect[illegible]

9. [illegible]. These specifications do not apply t cers in use before 15th October 1941.

---000---

Ref. [illegible] dated 30th September 1941.

[illegible] communicated to the Secretaries of Road Traffic and the Deputy Secretary, Madura.

E. W. Bouchier.
Secretary, [illegible] Road R
Traffic Board, Madra

Madras,)
30-9-1941.)

(By Order)

[illegible]
Headclerk.

To the Secretaries of all Road Traffic Boards.
Copy to the Deputy Secretary, Madura.

M. T. B. F. 1]

27

MYSORE TRAFFIC BOARD.

OFFICE OF THE SECRETARY,
~~THE PUBLIC OFFICES~~

No. T.2643/41-42.

Dated Bangalore, 26th Decr., *1941.*

R.T 75-41-4

FROM

The *Secretary, Mysore Traffic Board,*
BANGALORE.

TO

The Secretary,
Central Road Traffic Board,
Chepauk, MADRAS.

SIR,

Subject:- Use of Producer Gas Plant.

I am directed to invite kind reference to the -- special Rules applicable to Gas Producers installed in Motor Vehicles published in the Fort St.George Gazette Extraordinary dated 24th October 1941, and to request you to be so good as to intimate the model, if any, of the Gas Plant approved by you for the Madras Province.

The information may kindly be furnished early.

I have the honour to be,
Sir,
Your most obedient servant,

(ofc) 26/12/41
Secretary,
Mysore Traffic Board.

CSG:2.

M. T. B. F. 11] MYSORE TRAFFIC BOARD.

SUBJECT.....

.....

.....

Section

Filo No.

Serial No.

Diary No. of letter replied to.....

No. T. 2643/M-Cr & 26.12.41

To.

The Secy Central Road
Traffic Board Madras.

Subj:- Use of producer Gas plant.

Sir,

Date of issue.....

I am directed to invite Kind
reference to the Special Rules applicable to
Gas producers installed in motor vehicles
published in the Fort St George Gazette Extraordinary
dated 24th October 1941 and to
request you to be so good as to
~~intimate~~ ~~despatch~~ intimate if any the model of
the gas plant approved by you
for the Madras Province.

Signed by.....

The information may
Kindly be furnished early.

I have etc

List of enclosures.....

Copied by.....

Examined by.....

WD 07201—GPB—2,000—29-10-40

2/12/41
Secy/M. T.B.

By
16/12/41

(29)

C.F. 32 (a).

X R.T 75-41-5 M.T.B.

Department	Received Registered
From (Name) E.W. Bouchier, Es., I.C.S.,	To
Designation Secretary, Central Road Traffic Board,	The Secretary, Mysore Traffic Board, Bangalore.
Station Government House Compound, Mount Road, M a d r a s.	

Enclosures:

List.

L.Dis No. 148/42. dated 9th January 1942.

Sir,

Sub: MOTOR VEHICLES - Producer Gas Plants - Approved models - List - Furnishing of.

Ref: Your letter No.T.2643/41-42 dated 26-12-41.

With reference to your letter read above, I enclose herewith a list of Producer Gas Plants approved by the Central Board with the names of manufacturers.

placed below.

Office of the Central Road Traffic Board,
Government House Compound, Mount
Road, Madras, Dated 18-12-41.

LIST OF APPROVED PRODUCER GAS PLANTS.

1. Messrs. Simpson & Co. Ltd., Madras. M.P.1.
2. " T.V.Sundaram Iyengar & Sons. Ltd., Madura. M.P.2.
3. " Kannabiran Motor Works, Madras. M.P.3.
4. " V.M.S. Karur. M.P.4.
5. " P.S.S. Motor Service Ltd., Madura. M.P.5.
6. " Ar A.Shenbaga Nadar and P.V.P. Velasubramaniaya Nadar, Madura. M.P.6.
7. " Chakrapany Chetty & Sons., Madura. M.P.7.
8. " Meenambigai Motor Service, Virudhunagar. M.P.8.
9. " Addison & Co.Ltd., Madras. M.P.9.
10. " U.M.S. (Coimbatore) Ltd., Coimbatore. M.P.10.
11. " Pioneer Gas Producer Works, Madras. M.P.11.
12. " Andhra Engineering Co., Bezwada. M.P.12.
13. " P. Govindaraj & Sons., Guntur. M.P.13.
14. " Rajagopal Motor Works, Madras. M.P.14.
15. " G. Rajagopal Mudaliar & Bros., Madura. M.P.15.
16. " National Motor Works, Coimbatore. M.P.16.
17. " Messrs.Ford Motor Co. of India, P.B.357, Madras. M.P.17.
18. " Messrs. Rajan Motor Works, ~~Madurax~~ Selur, Tellakulam Post, Madura, - M.P. 18.

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draft

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE

General and Revenue Secretariat

No. T 3273-83 : R. T. 75-41—6 *Dated, Bangalore,* 2.2.1942

end: one.

From

The Secretary to the Government of His Highness the Maharaja of Mysore,
Law Department

To —

The Inspector General of Police.
The District Magistrates of Districts.
The Director of Industrial Planning in Mysore B'lore.

Sir,

I am directed to forward hereth a copy of the ~~marginaly~~ annexed ~~brief~~ draft amendment to Rules re Pub. Service Vehicles ~~-nored notification~~ for favour of ~~information and necessary~~ Government's opinion if ~~action/suggestions~~ they are suitable for being incorporated in the Rules.

I have the honour to be,
Sir,
Your most obedient servant,

2/2/42

Secretary to Government,
Law Department.

2/2

DRAFT AMENDMENT.

After rule 84 of the said rules, the following heading and rules shall be inserted, namely:-

"Special rules applicable to gas producers installed in motor vehicles.

84-A. For the purposes of rules 84-B to 84-M the term 'producer' means the whole of the equipment necessary for the generation of producer gas and its utilization in the engine of a motor vehicle.

84-B. (a) Every producer fitted to a motor vehicle on or after the 1st March 1942 shall be of a model approved by the ~~Provincial Transport Authority~~ Mysore Traffic Board and made by a manufacturer -- approved by such authority. Every such producer shall exhibit in a conspicuous place on the generator a plate showing, in addition to the manufacturer's name and serial number, the mark assigned to the model by the Mysore Traffic Board.

(b) Every manufacturer seeking approval ~~of~~ for a producer model shall submit to the Mysore -- Traffic Board specifications and drawings in duplicate (which may be blue prints or photostat) of the model he proposes to manufacture, together with a copy of the instructions for operating the producer. He shall also give in writing to submit a producer of that model to a laboratory test and also to produce a bus or lorry fitted with a producer of that model at such time and place and for such tests including a road test of not less than fifty miles continuous run as may be determined by the Mysore Traffic Board or by such officer as that Board may depute in this behalf. No modification shall be

made in an approved model except with the approval of the Mysore Traffic Board. Such authority may subject the model as modified to such test as it thinks necessary before approving the modification.

84-C. No producer model shall be approved unless it satisfies the provisions of rule 84-D.

84-D. (a) All materials used in the construction of the producer, except any component parts thereof that may be expressly excluded by the manufacturer in his guarantee, shall be suited to the load of the vehicle in which it may be installed and the temperature, chemical and other conditions under which it may be used and shall be such as will last under -- reasonable conditions of operation and maintenance, for not less than two years.

(b) The producer shall be of simple design and construction and shall be capable of being -- installed in a vehicle in such manner as:-

(i) not to interfere with the steering and road safety of the vehicle, or with the driver's range of vision including his view to the rear -- through the driving mirror or with any signals or signalling devices required under the provisions of the Act and these rules; and

(ii) not unduly to impair the pay-load space and the weight distribution of the vehicle.

(c) The weight of the producer shall be a minimum having regard to the requirements of strength, rigidity, resistance to high temperature and corrosion, and to the type of vehicle to which it is to be fitted.

(d) The effective capacity of the fuel hopper shall give the vehicle an operating distance of not less than 50 miles without recharging.

(e) The producer shall be designed with a view to accessibility and ease of maintenance, cleaning, charging and ash removal. Provision for drainage shall be made where necessary.

(f) All installations connected with the producer shall be securely fixed. The installations shall not form a single inflexible unit but shall be connected with flexible couplings at appropriate -- points to relieve intermediate stresses.

(g) (i) The manufacturer shall take precautions in the manufacture of producers to ensure safety with special regard to risk from fire, gas poisoning and blow-back of hot charcoal.

(ii) All equipment and piping shall be free from gas or air leaks.

Covers of the furnace and gas filters and cocks and packings shall be air-tight. If a -- generator vent pipe is fitted, the pipe shall be connected directly to the furnace or shall branch from a pipe as near as possible to the furnace. If an escape funnel is provided for use during the air-blowing operation, the pipe shall exhaust above the roof level.

(iii) Exposed surfaces at high temperatures shall be screened against accidental contact.

(iv) The compartment containing the generator shall be lined with asbestos or other hea resisting material not less than ¼ inch thick.

(v) In the instructions issued by manufacturers to purchasers of producers regarding the use of the producer, instructions shall be included to the effect that garages and buildings in which producer gas vehicles may be housed shall have permanent ventilation in addition to doors and windows tha may be opened.

Capacity of cleaners.

(h) The generator and the cleaning system shall be so designed that they will operate for not less than 50 miles without requiring attention or cleaning.

Piping.

(i) All piping shall be of substantial and gas tight construction and provided with such joints as are necessary for the effective maintenance and repair of the vehicle. Every joint or weld shall be strong.

Painting.

(j) All parts of a producer except those exposed to high temperatures shall be suitably -- painted, and parts exposed to high temperatures shall be painted with a satisfactory heat-resisting paint.

Lay-out.

84-E. The whole of the producer shall be installed either outside or underneath the body of a vehicle. If the construction of the body of the -- vehicle is such that some part of the producer should be inside the body of the vehicle such part shall be covered so as to prevent any ill effect from gas -- leakage or inconvenience due to excessive heat.

Location of the generator.

84-F. In the case of a motor bus, the generator of the producer shall be located at the rear in such a position as to cause as little interference as -- possible with the weight distribution. In the case of a lorry, the generator of the producer may be

located either at the rear, as prescribed for buses, or at the front. If the generator is located at the front, it shall be fitted behind the driver's cab in such a position as not to interfere with visibility or signalling.

84-G. If the generator of the producer is fitted at the front of the vehicle--

(i) the main fuel tank shall be located as far removed from the generator as practicable;

(ii) such tank shall be fitted below the floor level of the vehicle and the filling spout shall be located on the opposite side of the vehicle to the generator and not less than 4 feet away from the generator; and

(iii) where an auxiliary fuel tank with gravity feed is fitted, the capacity of such tank shall not exceed one gallon and it shall be located in the front portion of the vehicle as far away from the generator as practicable.

84-H. The over-all dimensions of the vehicle, with the producer installed, shall not exceed those permitted under these rules.

84-I. Cleaners using solid filter material shall be installed on the vehicle in such a manner as to show efficient and convenient packing of the filter material.

84-J. The generator shall be kept away from any part of the body by at least one inch.

84-K. The road clearance at the bottom of the furnace shall be not less than 12 inches when the vehicle is unladen with the hopper full.

84-L. The performance of the vehicle when running on gas alone shall comply with the following requirements:-

The vehicle shall be capable of moving on gas alone in not more than 15 minutes from the commencement of the starting process. The engine and the producer shall be cold at the beginning of the process.

The vehicle shall be capable of maintaining the following speed, when running on gas alone, on level roads:-

(i) Motor buses - loaded - 25 miles per hour.

(ii) Lorries not being a heavy transport vehicle - loaded - 22 miles per hour.

84-M. When a vehicle which has already been registered is fitted with a producer, it shall invariably be inspected and tested before the alteration is recorded in the certificate of registration under Section 11 of the Act and the rules framed thereunder.

84-N. All producers, including those fitted to vehicles before the 1st March 1942, shall be of such construction and so fitted as to provide adequate protection against danger of damage or injury arising from fire, gas poisoning or contact with exposed surfaces at high temperature".

84.O. These rules shall apply mutatis mutandis to private motor lorries.

CSG:

By order,

2/3.1.42
Secy. to Govt.
Law Dept
3.1.1942

GOVERNMENT OF HIS HIGHNESS THE MAHARAJA OF MYSORE.

General and Revenue Secretariat,

No. T 3273-83 | R.T. encl: 1. Dated Bangalore, January 1942.
2. 2. 42

R.T 95-41-6

FROM

The Secretary to the Government of His Highness the Maharaja of Mysore,
Law Department.

To

The Inspector General of Police.
The District Magistrates of Districts.
The Director of Industrial Planning in Mysore, Bangalore.

Sir,

I am directed to forward herewith a copy of the annexed draft amendment to Rules regarding Public Service Vehicles for favour of opinion if they are suitable for being incorporated in our rules.

I have the honour to be

Sir,

Your most obedient servant,

Secretary to Government,
Law Department.

BHK/12.

DRAFT AMENDMENT.

After rule 84 of the said rules, the following heading and rules shall be inserted, namely:-

"Special rules applicable to gas producers installed in motor vehicles.

84-A. For the purposes of rules 84-B to 84-M the term 'producer' means the whole of the equipment necessary for the generation of producer gas and its utilization in the engine of a motor vehicle.

84-B. (a) Every producer fitted to a motor vehicle on or after the 1st March 1942 shall be of a model approved by the Mysore Traffic Board and made by a manufacturer approved by such authority. Every such producer shall exhibit in a conspicuous place on the generator a plate showing, in addition to the manufacturer's name and serial number, the mark assigned to the model by the Mysore Traffic Board.

(b) Every manufacturer seeking approval for a producer model shall submit to the Mysore Traffic Board specifications and drawings in duplicate (which may be blue prints or photostat) of the model he proposes to manufacture, together with a copy of the instructions for operating the producer. He shall also give in writing to submit a producer of that model to a laboratory test and also to produce a bus or lorry fitted with a producer of that model at such time and place and for such tests including a road test of not less than fifty miles continuous run as may be determined by the Mysore Traffic Board or by such officer as that Board may depute in this behalf. No modification shall be

made in an approved model except with the approval of the Mysore Traffic Board. Such authority may subject the model as modified to such test as it thinks necessary before approving the modification.

84-C. No producer model shall be approved unless it satisfies the provisions of rule 84-D.

84-D. (a) All materials used in the construction of the producer, except any component parts thereof that may be expressly excluded by the manufacturer in his guarantee, shall be suited to the load of the vehicle in which it may be installed and the temperature, chemical and other conditions under which it may be used and shall be such as will last under reasonable conditions of operation and maintenance, for not less than two years.

(b) The producer shall be of simple design and construction and shall be capable of being -- installed inx a vehicle in such manner as --

(i) not to interfere with the steering and road safety of the vehicle, or with the driver's range of vision including his view to the rear through the driving mirror or with any signals or signalling devices required under the provisions of the Act and these rules; and

(ii) not unduly to impair the pay-load space and the weight distribution of the vehicle.

(c) The weight of the producer shall be a minimum having regard to the requirements of strength, rigidity, resistance to high temperature and corrosion, and to the type of vehicle to which it is to be fitted.

(41

(d) The effective capacity of the fuel hopper shall give the vehicle an operating distance of not less than 50 miles without recharging.

(e) The producer shall be designed with a view to accessibility and ease of maintenance, cleaning, charging and ash removal. Provision for drainage shall be made where necessary.

(f) All installations connected with the producer shall be securely fixed. The installations shall not form a single inflexible unit but shall be connected with flexible couplings at appropriate points to relieve intermediate stresses.

(g) (i) The manufacturer shall take precautions in the manufacture of producers to ensure safety with special regard to risk from fire, gas poisoning and blow-back of hot charcoal.

(ii) All equipment and piping shall be free from gas or air leaks.

Covers of the furnace and gas filters and cocks and packings shall be air-tight. If a generat vent pipe is fitted, the pipe shall be connected directly to the furnace or shall branch from a pipe as near as possible to the furnace. If an escape funnel is provided for use during the air blowing operation, the pipe shall exhaust above the roof leve

(iii) Exposed surfaces at high temperatures shall be screened against accidental contact.

(iv) The compartment containing the generato shall be lined with asbestos or other heat-resisting material not less than ½ inch thick.

(v) In the instructions issued by manufacturers to purchasers of producers regarding the use of the producer, instructions shall be included to the effect that garages and buildings in which producer gas vehicles may be housed shall have permanent ventilation in addition to doors and windows that may be opened.

(h) The generator and the cleaning system shall be so designed that they will operate for not less than 50 miles without requiring attention or cleaning.

(i) All piping shall be of substantial and gas tight construction and provided with such joints as are necessary for the effective maintenance and repair of the vehicle. Every joint or weld shall be strong.

(j) All parts of a producer except those exposed to high temperatures shall be suitably painted, and parts exposed to high temperatures shall be painted with a satisfactory heat-resisting paint.

84-E. The whole of the producer shall be installed either outside or underneath the body of a vehicle. If the construction of the body of the vehicle is such that some part of the producer should be inside the body of the vehicle such part shall be covered so as to prevent any ill effect from gas leakage or inconvenience due to excessive heat.

84-F. In the case of a motor bus, the generator of the producer shall be located at the rear in such a position as to cause as little interference as possible with the weight distribution. In the case of a lorry, the generator of the producer may be

located either at the rear, as prescribed for buses, or at the front. If the generator is located at the front, it shall be fitted behind the driver's cab in such a position as not to interfere with visibility or signalling.

84-G. If the generator of the producer is fitted at the front of the vehicle—

(i) the main fuel tank shall be located as far removed from the generator as practicable;

(ii) such tank shall be fitted below the floor level of the vehicle and the filling spout shall be located on the opposite side of the vehicle to the generator and not less than 4 feet away from the generator; and

(iii) where an auxiliary fuel tank with gravity feed is fitted, the capacity of such tank shall not exceed one gallon and it shall be located in the front portion of the vehicle as far away from the generator as practicable.

84-H. The over-all dimensions of the vehicle, with the producer installed, shall not exceed those permitted under these rules.

84-I. Cleaners using solid filter material shall be installed on the vehicle in such a manner as to show efficient and convenient packing of the filter material

84-J. The generator shall be kept away from any part of the body by at least one inch.

84-K. The road clearance at the bottom of the furnace shall be not less than 12 inches when the vehicle is unladen with the hopper full.

(44) 9c

84-L. The performance of the vehicle when running on gas alone shall comply with the following requirements:-

The Vehicle shall be capable of moving on gas alone in not more than 15 minutes from the commencement of the starting process. The engine and the producer shall be cold at the beginning of the process.

The vehicle shall be capable of maintaining the following speed, when running on gas alone, on leve roads:-

(i) Motor buses - loaded - 25 miles per hour.

(ii) Lorries not being heavy transport vehicle - loaded - 22 miles per hour.

84- M. When a vehicle which has already been registered is fitted with a producer, it shall invariably be inspected and tested before the alteration is recorded in the certificate of registration under Section 11 of the Act and the rules framed thereunder.

84-N. All producers, including those fitted to vehicles before the 1st March 1942, shall be of such construction and so fitted as to provide adequate protection against danger of damage or injury arising from fire, gas poisoning or contact with exposed surfaces at high temperatu[illegible]

84.0- These rules shall apply mutatis mutandis to private motor lorries.

By Order,

for Secretary to Government,
Law Department.

To

The Compiler, Mysore Gazette, for publication in part IV of the Gazette to print and Supply 50 copies to the Secretary, Mysore Traffic Board.

(45) SECRETA... 2359 FEB 7 1942 MYSORE TRAFFIC

OFFICE OF THE DISTRICT MAGISTRATE,
MANDYA DISTRICT,

No. JC-C-453/41-42.
Enc.

Mandya, dated 4th February 1942.

RT 75-41-7

FROM

C.M.H.RANAJODHA SINGH, ESQUIRE, B.A.,
~~DISTRICT~~ MAGISTRATE,
MANDYA DISTRICT,
MANDYA.

To

H.V.NARAYANA RAO, ESQUIRE, B.A., LL.B.,
Secretary to Government of Mysore, Law Department,
BANGALORE.

SIR,

SECY. LAW DEPT. 7 FEB 1942 GOVT OF MYSORE

With reference to your letter No.T. 3273-83/R.T. dated 2nd February 1942 forwarding a copy of the draft amendment to rules regarding public Service Vehicles for my opinion, I have the honour to state that they appear to be suitabl for being incorporated in the Rules.

I have the honour to be,

Sir,

Your most obedient servant,

DISTRICT MAGISTRATE,
Mandya District.

(46)
2434
M. T. B.

Tele {gram: POLICE
phone: 2108

POLICE DEPARTMENT.

OFFICE OF THE
INSPECTOR-GENERAL OF POLICE IN MYSORE,

No. T.C.169/41-42

Bangalore, dated 12th February 1942

R.T 75-41-8

FROM

E. G. B. PEEL, Esq., C.I.E.,
Inspector-General of Police in Mysore,
Bangalore.

To

The Secretary,
Mysore Traffic Board,
Bangalore

SIR,

In reply to letter No.T.3273-83/R.T. dated 2-2-1942 from the Secretary to Government, Law Department, regarding the suitability for incorporating the special rules applicable to gas producers - installed in motor vehicles in our rules, I have the honor to state th they appear to be suitable.

I have the honor to be,
Sir,
Your most obedient servant,

For Inspector-General of Police.

CM.

(47)

District Magistrate,
Office of the Deputy Commissioner, &
MYSORE DISTRICT,

No. G2- 145/41-42
Encl.

Dated, Mysore, the 14th February 194 2.

R.T 75-41-9

From

The District Magistrate,
Mysore District, Mysore.

SECRETARY, 2455 FEB 17 1942 MYSORE TRAFFIC BOARD

LAW DEPT. RT

To

The Secretary, to Government,
Law Department,
BANGALORE.

Sir,

Subject:- Draft amendment to rules regarding Public Service Vehicles.

With reference to your letter No.T.3273-33/R.T. dated 2nd. February 1942 calling for my opinion on the above subject, I have the honor to state that the draft amendments to rules are suitable for being incorporated in our rules.

I have the honour to be,
Sir,
Your most obedient servant,

14/2

District Magistrate,
(Absent from Head Quarters)
Mysore District.

2479
FEB 20 1942
TRAFFIC BD
FEB-17 1942

Submitted for kind perusal.

(48

Law Minister
Development Secretary

With the compliments of the Director of Information, Bombay.

R.T 75-41-10

Law Dept. No. 118
9-2-42.

The Government of Bombay has considered the report of the Committee appointed to prepare approved specifications for producer gas plant on motor vehicles.

2. Copies of the approved specifications are now available at the office of the Director of Industries, Bombay, the Provincial Transport Authority, Secretariat, Bombay, Regional Transport Authorities and all District Superintendents of Police. Manufacturers of producer gas plant may obtain a certificate of approval of sample units of their plant from the Director of Industries.

3. In view of the damage that may be caused to motor engine by the use of inefficient producer gas plant, the Government gives notice that it proposes to take power to prohibit the use of unapproved producer gas plant on all motor vehicles, including private cars.

4. Meanwhile, in order to encourage the fitting of approved producer gas plant on transport vehicles, the Government will give until further notice a refund of 50 per cent of the quarterly tax for four quarters after fitting to transport vehicles fitted with approved producer gas plant subject to the plant passing a quarter inspection for efficiency.

5. The Government will also give advances to enable approve owners of transport vehicles to purchase approved producer gas pla These advances will be repayable within a period of 18 months. Applications for advances should be made to the Director of Indust

M. T. B. F. 1]

MYSORE TRAFFIC BOARD.

OFFICE OF THE SECRETARY,
[redacted],

No. T 3592 | 41-42 Dated Bangalore, 3rd March, ...1942.

R.T 45-41-11

FROM

The *Secretary, Mysore Traffic Board,*
BANGALORE.

To

The Provincial Transport Authority,
Secretariat,
B O M B A Y.

SIR,

Subject:- Approved specifications for producer gas plants on motor vehicles.

I am directed to request you to be so good as to send, if there is no objection, three copies of the approved specifications for producer gas plants on motor vehicles for office reference.

Thanking you for kind early compliance,

I have the honour to be,
Sir,
Your most obedient servant,

Secretary,
Mysore Traffic Board.

CSG:2.

(4-9
151.

M. T. B. F. 11] MYSORE TRAFFIC BOARD.

SUBJECT.....

.....

.....

Section R.T

File No. 75-41

Serial No. 11

iary No. of letter replied to.....

No. T. 3592 /41-42 dt 3.3.42

To.

The Provincial Transport Authority
~~Executive Engineer~~
Secretariat, Bombay.

Subj:— Approved Specifications for producer Gas Plants on motor Vehicles.

ate of issue.....

Sir,

igned by.....

I am directed to request you to be so good as to send, if there is no objection, ~~the~~ ten copies of the approved Specifications for producer Gas Plants on motor Vehicles for ~~the~~ office reference.

ist of enclosures.....

Thanking you for kind early Compliance.

opied by.....

I have the honour
Sir
Your most obedient
Servant
Secretary
Mysore Traffic Bd
3.3.42

xamined by.....

WD 07201—GPB—2,000—29-10-40

MYSORE 2496. FEB 23 1942 (151)

Tel. Address :— Depcom.
CHITALDRUG.

In reply, please refer to :
No. J2.L.2491/41-42
Enclosures :

OFFICE OF THE DISTRICT MAGISTRATE,
CHITALDRUG DISTRICT.

Dated Chitaldrug, ...21st February..... 1942.

R.T 75-41-12

FROM

SECY. LAW DEPT. 23.2.42 GOVT OF MYSORE

R.P. Mallappa, Esq., B.A., LL.B.,
District Magistrate,
Chitaldrug District.

H. V. Narayana Rao, Esq., B.A., LL.B.,
Secretary to Government,
Law Department,
Bangalore.

Sir,

Subject:- Special rules applicable to gas producers installed in Motor Vehicles.

With reference to your letter No.T.3273-83 R.T. dated 2-2-42 forwarding for my opinion a copy of the draft amendment to Rules regarding public service vehicles so as to include the above provision, I have the honour to state that the additional rules are suitable and may be incorporated in the rules as proposed.

I have the honour to be,
Sir,
Your most obedient servant,

District Magistrate,
Chitaldrug Dist.

MN

GOVERNMENT OF MYSORE.

LABOUR DEPARTMENT.

2531
FEB 25 1942

Hm 25.2.42

In reply refer to:
No. 9 L 3 (30) Gl. M
Encls.

OFFICE OF THE COMMISSIONER OF LABOUR IN MYSORE
MYSORE CHAMBER OF COMMERCE BUILDING,
KEMPE GOWDA ROAD,

Dated Bangalore, the 24th Feb. 1942

R.T 75-41-13

FROM B.G.A.Mudaliar,Esq.,B.A.,B.Sc.,A.M.I.Mech.E.,
Director of Industrial Planning and
~~The~~ *Commissioner of Labour in Mysore, Bangalore.*

To

H.V.Narayana Rao,Esq.,B.A.,LL.B.,
Secretary to Government,
Law Department, Bangalore.

Sir,

Subject:- Amendment to Rules regarding Public Service Vehicles.

With reference to your letter No.T.3273-83/R.T. dated the 2nd January 1942,forwarding,for opinion, draft amendment to Rules regarding Public Service Vehicles, I have the honour to state that I have gone through the rules and they may be adopted. With reference to the date mentioned in the Rules, I would suggest that the date may be altered from the 1st to 15th March 1942 as it would take some time for manufacturers to get into touch with the Inspecting authority after the amended rules have been published.

I have the honour to be,
Sir,
Your most obedient servant,

B.G.A. Mudaliar

Commissioner of Labour
&
Director of Industrial Planning.

GOVERNMENT OF MYSORE

15

Telegraphic Address

RT 75-41-14

No. L.Dis.J4.C.961/41-42.
Encls. one.

The District Magistrate,
Kolar District.
Kolar.

Date 27th February 1942.

To

H. V. Narayana Rao, Esq., B.A.,LL.B.,
Secretary to Government of Mysore,
Law Department, Bangalore.

Subject:-Draft amendment to Rules regarding Public Service Vehicles - special rules applicable to gas producers installed in motor vehicles.

With reference to your letter No.T.3273-83/R.T. dated 2nd February 1942 on the above subject calling for my opinion ~~ex~~ if the draft rules are suitable for being incorporated in the rules, I have the honour to state that the draft rules are suitable and may be incorporated in the rules. The Bus Inspector, Kolar, has submitted some suggestions in respect of rules 84-D, 84-E, and 84-H and some additions with regard to the construction and essentials required. A copy of his report is enclosed herewith for suitable action, if deemed necessary

I have the honour to be
Sir,
Your most obedient servant,

for District Magistrate,
Kolar District.
(absent from headquarters).

VVR.

(74)

Report No.B.I.23/41-42 dated 12-2-1942 from the Bus Inspector, Kolar.

--

As per memo No.J4.C.961/41-42 dx I beg to bring the following few suggestions suitable for beirg ~~x~~ incorporated in the special rules applicable to gas producers installed in Motor Vehicles.

1) Materials of construction. 84-D.

The following could also be included after the above rule.

"No hose pipes or rubber tubes should be used".

2) Lay out. 84-E.

The above rule permits the producer to be fixed inside the body of the vehicle. Whereas the rule 84-J says that the generator shall be kept away from any part of the body by at least one inch. There seems to be some difference between 84-E and 84-J.

3) Dimensions. 84-H.

The overall length of the vehicle is not specified in the rules,, With regards to the construction of Motor Vehicles. This was pointed out to the Traffic Board by the undersigned in August 1939 through the District Magistrate. If the Gas Plants are fixed in the rear of the vehicle by extending the chasis of the vehicle beyond the safety limit, the vehicle would be unstable and dangerous Hence I again submit that the rule No.2 in the old fitness certificate i.e., "The extension of the body behind the rear of the chasis should not exceed 7/24 of the overall length of the vehicle reckoning from the centre of the rear axle." be incorporated in the present rules.

4) The following may also be added to the rules with regards to the construction.

a) Hopper doors, Gas outlet doors, Dust boxes and Filters should all be easily removable and should be so contructed that they may be easily opened or closed without the aid of spanners or other tools.

b) Every gas plant vehicle should have spare asbestos gaskets for Hopper doors and covers, and rubber or or felt gaskets for Filter covers and dust boxes. The above is important because if

p.t.o.

if there is any leakage on the road-side the packings could ~~xx~~ easily be replaced.

5) The Hopper ash-chamber and grates of all producer vehicles are many a time cleaned on the roadside and in the bus stands, thereby dropping and throwing down the red hot charcoal and ash on the floor. This must be removed away from the road or the bus stand area and quenched with water.

6) A small fire extinguisher may be insisted on every producer gas vehicle or at least a drum with water.

For kind perusal.

------ Sd/- A. N. Varadaraju

Bus Inspector.

"C o p y"

27/2

for District Magistrate,
Kolar District.

VKR.

(158)

OFFICE OF THE DISTRICT MAGISTRATE
TUMKUR DISTRICT
DATED TUMKUR THE 28TH FEBRUARY 42

No. M.B.136
41/42.

SECRETARY 2562 MAR 4 1942 MYSORE TRAFFIC BOARD

From

P. Suryanarayana Setti, Esq: B.A., LL.B.,
District Magistrate,
Tumkur District, Tumkur.

SECY. LAW DEPT. 3 MAR 1942 GOVT OF MYSORE

To

H.V. Narayana Rao, Esquire., B.A., LL.B.,
Secretary to the Government of Mysore
Law Department-- Bangalore.

Sir,

page 38

With reference to your letter No. T.3273-83/R.T. dated 2-2-1942 forwarding for opinion a copy of the draft-amendment to Rules regarding Public Service vehicles, I have the honour to state that the draft rules are sufficiently comprehensive and suitable for incorporation in the said rules.

I have the honour to be,
sir,
Your most obedient servant,

P. Suryanarayana Setti
DISTRICT MAGISTRATE
TUMKUR DISTRICT.

s.km/28

K.T. 15-41-15

No. 82/IV/1428.
Provincial Transport Office,
Secretariat, Bombay.
Dated MAR 7 1942 (56)

From

T. T. Kothavala, Esquire, M.A.,B.Sc.,
Secretary, Provincial Transport Authority,
Bombay.

To

The Secretary,
Mysore Traffic Board,
BANGALORE.

SECRETARY, 2597 MAR 9 1942 MYSORE TRAFFIC BOARD

Sir,

page 98

Reference your letter No.T-3592/41-42, dated the 3rd March 1942. Three copies of the leaflet entitled "Standard Specifications for Charcoal Gas Producer for Motor Vehicles in Bombay Province as approved by the Government of Bombay" are sent herewith as requested.

6/94

I have the honour to be,
Sir,
Your most obedient servant,

Secretary,
Provincial Transport Authority.

SSM/6.

Gratis.

Standard Specification for Charcoal Gas Producer for Motor Vehicles in Bombay Province as approved by the Government of Bombay.

I.—General

(*a*) The specification applies only to wood charcoal gas producers installed on motor vehicles.

(*b*) *Definition.*—(*i*) *Producer* means the whole equipment necessary for generation, cooling and cleaning of gas.

(*ii*) *Generator.*—Part of producer in which the gas is produced.

2. Construction.

(*a*) *Up-draft type Generators.*—If the generator has a single-shell, the shell shall be constructed of mild-steel plate having a thickness not less than 1/8″ for a height of 12″ above the grate or to the top of the gas outlet, whichever is the less.

If the generator has a double shell, the firebox shall be constructed of mild-steel plate having a thickness not less than 1/8″, and the outer shell of mild-steel plate having a thickness not less than 16 B.G. (0·065″).

(*b*) *Single Shell Generators* (*other than up-draft type*).—The shell shall be constructed of mild-steel plate having a thickness not less than 14 B.G. (0·083″) for a distance of not less than 12″ from the centre line of the tuyeres or air-openings.

(*c*) *Double Shell Generators* (*other than up-draft type*).—The inner shell shall be constructed of mild-steel plate having a thickness not less than 14 B.G. (0·083″) for a height not less than 12″ above the centre line of the tuyeres or air-openings and the outer shell of mild-steel plate having a thickness not less than 16 B.G.

(*d*) *Cross-draft type Generators.*—Unless a special refractory lining is provided, the minimum depth of the fuel between the centre of the tuyere outlet and the shell shall be minimum of 5″ in any direction. This projection of the tuyere is vitally important and these limits must be closely

adhered to, to ensure the projection measured from tip of tuyere to the inside of the gas producer body is 5 inches ± 1/8 inches tolerance.

(*e*) *Grates.*—The grate shall be of heavy section white cast iron or any other approved material.

(*f*) *Generator Capacity.*—The fuel capacity of the generator shall be such that the weight of charcoal in the generator when full is at least twice the weight of charcoal normally required for a road trip of 50 miles.

(*g*) *Generator Openings.*—These shall be sufficient for quick filling and cleaning purposes and shall be provided with covers held down in such a way as to effectively seal the openings.

(*h*) *Gas coolers.*—Whether multiple or single tube gas coolers are employed, the tube shall be constructed of mild steel sheets having a thickness not less than 18 B.G. (0·049″). The cooling system shall be so designed that the gas is effectively cooled before entering the cleaners. Provision shall be made for cleaning the coolers whether multiple or single and for effectively sealing the cleaning opening.

(*i*) *Primary Cleaners.*—These shall be dust traps of the dry type.

(*j*) *Secondary Cleaners.*—The secondary cleaners may be of either the dry or wet type.

(*k*) *Final Cleaners.*—The final cleaners shall be provided with either a bronze-wire gauze of not less than 200 mesh or a suitably disposed felt.

(*l*) *Arrangements of cleaners.*—There shall be no by-pass arrangement between any of the filters and the engine, so that all gas going to the engine must pass through all three cleaners.

(*m*) *Capacity.*—The capacity of each cleaner shall be such that the cleaner can be used for a run of at least 100 miles (4 to 5 hours running) without requiring cleaning.

(*n*) *Casings.*—These shall be made of mild-steel plates of a thickness not less than 18 B.G. (0·049″) reinforced where necessary.

(*o*) *Cleaner openings.*—All cleaners shall be provided with openings sufficiently large to admit of effective and quick cleaning, and shall be provided with covers held down in such a way as to effectively seal the openings.

sheet of a thickness not less than 20 B.G. and shall be provided with strainers for inlets and outlets and a suitable arrangement for determining the water level.

(*q*) *Jointing Material.*—All joints on the generators shall be made of suitable and approved fire-proof material. Rubber jointing of a suitable quality may be used on the cleaners only.

(*r*) *Pipe fittings.*—Pipings shall be made of mild-steel, iron or copper sheet having a thickness not less than 18 B.G. (0·049″) and shall be of gas-tight construction. Flanges for piping shall be constructed from metal plate of minimum thickness $\frac{1}{4}$″; cooling piping for the tuyere shall be $\frac{3}{8}$″ internal diameter.

(*s*) *Control valves.*—All control valves on the producer unit shall be of gun metal with packed glands.

II.—Safety Regulations.

(1) The generators shall be mounted at a minimum distance of 3″ from any body wood-work. The space round the generators shall be effiotively covered with heat insulating materials and efficiently guarded to prevent contact with any part under high temperature.

(2) The arrangement of the generator and its component parts in the vehicle shall not interfere with the visibility of the driver, road signalling and existing steering facilities.

(3) Precautions shall be taken by the manufacturer of the producer unit in arranging his equipment to ensure safety, with special regard to fire-risk, gas poisoning, and blow-black of charcoal etc. Any exposed surfaces liable to attain high temperature shall be effectively screened against accidental contact.

(4) The generators shall be mounted in such a position that it shall be at a minimum distance of 2 feet from any petrol tank or piping. The air inlet to the generator shall point away from the petrol filler cap, a point which shall be at least 4 feet away from the generator.

(5) Road clearance of the installed unit on the truck shall be a minimum of 12″.

(6) All cleaners and coolers shall be mounted in a suitable manner to enable efficient and easy cleaning being made.

(7) All joints on generators, coolers, cleaners, piping, shall be gas tight.

(8) Where such equipment mounted on a motor vehicle or similar transport is housed in a garage, there shall be efficient and permanent ventilation.

III.—Testing.

(1) Generators, coolers, cleaners and all the pipings shall be hydraulically tested in the factory or prior to installation to a pressure of 5 lbs. per square inch to ensure all joints are gas tight and to ascertain any leakage in the water cooling system. Similarly all packings and joints must be able to resist heat and remain tight against a vacuum of 3 inches of mercury.

(2) Every manufacturer seeking approval of a producer model shall submit specification and drawings for the model he proposes to manufacture or is already manufacrured; before approval can be given the complete producer plant shall be inspected and tested out at an approved centre. The test shall comprise starting time, gas temperatures and pressures, cooling surface, gas cleanliness, fuel consumption, etc. For the carrying out of such a test the model should be supplied by the manufacturer to the Head of the Mechanical Engineering Department, V. J. Technical Institute, Matunga, Bombay. Besides a bench test of the model, a road test shall be carried out over a distance of 100 miles. Subsequent modification to be made in any approved and tested units shall be submitted for any modified test if required.

(3) All motor vehicles fitted with gas producers shall be tested once in three months by the appropriate authority appointed for this work for a road test of 25 miles run and inspected immediately afterwards for any defects.

Gratis.

Standard Specification for Charcoal Gas Producer for Motor Vehicles in Bombay Province as approved by the Government of Bombay.

I.—General

(*a*) The specification applies only to wood charcoal gas producers installed on motor vehicles.

(*b*) *Definition.*—(*i*) *Producer* means the whole equipment necessary for generation, cooling and cleaning of gas.

(*ii*) *Generator.*—Part of producer in which the gas is produced.

2. Construction.

(*a*) *Up-draft type Generators.*—If the generator has a single-shell, the shell shall be constructed of mild-steel plate having a thickness not less than 1/8″ for a height of 12″ above the grate or to the top of the gas outlet, whichever is the less.

If the generator has a double shell, the firebox shall be constructed of mild-steel plate having a thickness not less than 1/8″, and the outer shell of mild-steel plate having a thickness not less than 16 B.G. (0·065″).

(*b*) *Single Shell Generators (other than up-draft type).*—The shell shall be constructed of mild-steel plate having a thickness not less than 14 B.G. (0·083″) for a distance of not less than 12″ from the centre line of the tuyeres or air-openings.

(*c*) *Double Shell Generators (other than up-draft type).*—The inner shell shall be constructed of mild-steel plate having a thickness not less than 14 B.G. (0·083″) for a height not less than 12″ above the centre line of the tuyeres or air-openings and the outer shell of mild-steel plate having a thickness not less than 16 B.G.

(*d*) *Cross-draft type Generators.*—Unless a special refractory lining is provided, the minimum depth of the fuel between the centre of the tuyere outlet and the shell shall be minimum of 5″ in any direction. This projection of the tuyere is vitally important and these limits must be closely

adhered to, to ensure the projection measured from tip of tuyere to the inside of the gas producer body is 5 inches ± 1/8 inches tolerance.

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(*h*) *Gas coolers.*—Whether multiple or single tube gas coolers are employed, the tube shall be constructed of mild steel sheets having a thickness not less than 18 B.G. (0·049″). The cooling system shall be so designed that the gas is effectively cooled before entering the cleaners. Provision shall be made for cleaning the coolers whether multiple or single and for effectively sealing the cleaning opening.

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(*l*) *Arrangements of cleaners.*—There shall be no by-pass arrangement between any of the filters and the engine, so that all gas going to the engine must pass through all three cleaners.

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